

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of : Customer Number: 46320
: Confirmation Number: 9787
Erik BURCKART, et al. : Group Art Unit: 2143
: Examiner: D. Murray
Application No.: 10/723,924 :
Filed: November 26, 2003 :
For: EFFICIENT CONNECTION POOL VALIDATION

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief is submitted under 37 C.F.R. § 41.41 in response to the EXAMINER'S ANSWER dated April 29, 2008.

The Examiner's response to Appellants' arguments submitted in the Appeal Brief of February 7, 2008, raises additional issues and underscores the factual and legal shortcomings in the Examiner's rejection. In response, Appellants rely upon the arguments presented in the Appeal Brief of February 7, 2008, and the arguments set forth below.

REMARKS

Upon comparing the statement of the rejection found on pages 3-11 of the Examiner's Answer with the statement of the rejection found on pages 3-10 of the Second Office Action, Appellants have been unable to discover any substantial differences with one exception. The exception being that the Examiner has cited certain references in support of taking Official Notice as to a particular fact with regard to claim 3. Therefore, Appellants proceed on the basis of the Examiner's sole response to Appellants' arguments presented in the Appeal Brief are set forth on pages 11-23 of the Examiner's Answer.

Although out of order in which these arguments were presented by the Examiner, Applicants will first address the Examiner's newly presented arguments found on pages 16-19 of the Examiner's Answer. In these arguments, the Examiner has taken each of the seven different rationales described in M.P.E.P. § 2141 for supporting a conclusion of obviousness, and asserted that the claimed invention is obvious in view of each of these seven different rationales.

In quoting In re Kahn,¹ the Supreme Court affirmed the requirement that "rejections on unpatentability cannot be sustained by merely conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of unpatentability."² The Examiner's assertions found on pages 16-19, however, are conclusory statements that lack both factual support and a rational underpinning. With the exception of male G (i.e., commonly referred to as the TSM test), the Examiner did not make any factual

¹ 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

² KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007)

1 findings. In the "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in
2 View of the Supreme Court Decision in *KSR International Co. v. Teleflex Co.*" (hereinafter the
3 KSR Guidelines) published in the Federal Register on October 10, 2007, for each of the seven
4 separately identified "Rationales," a number of findings were identified. As described in the
5 KSR Guidelines, "Office Personal must then articulate" the findings associated with a particular
6 Rationale when making a conclusion of obviousness based upon the Rationale. Such an
7 articulation of findings is entirely absent from the Examiner's analysis on pages 16-19 of the
8 Examiner's Answer. Thus, Appellants' position is that the Examiner has failed to articulate the
9 underpinnings supporting the Examiner's conclusion as to obviousness of the claimed invention,
10 as required by KSR.

11

12

13 Regarding the Examiner's alleged "Argument (1)," to which the Examiner responded on
14 pages 11 and 12, upon reviewing Appellants' Appeal Brief, Appellants are unclear where the
15 arguments being attributed to Appellants were actually made in the Appeal Brief. The only
16 arguments made Appellants regarding Chintalapati that appear remotely close to the Examiner's
17 assertions are found in the paragraph spanning pages 4 and 5 of the Appeal Brief. However, the
18 crux of these arguments is not that Chintalapati does not teach a non-blocking operation, as
19 alleged by the Examiner. Instead, Appellants argued that "completely absent from the teachings
20 of Chintalapati is the notion of validating an idle connection by issuing a non-blocking I/O
21 operation to the idle connection."

22

23

1 Regarding "Argument (2)," the Examiner responded to Appellants' arguments, in part,
2 that Chintalapati does not teach validating an idle connection by issuing a non-blocking I/O
3 operation to the idle connection. The Examiner's response to these arguments is found on pages
4 12 and 13 of the Examiner's Answer. After reproducing certain portions of Chintalapati, the
5 Examiner asserted the following in the third full paragraph on page 13 of the Examiner's
6 Answer:

7 This is in fact the claimed invention. By polling connections Chintalapati determines
8 whether an event is pending (i.e. the connections is going to be used), a connection is active (i.e.
9 being used currently), or idle (i.e. not being used, therefore useable on demand or as defined by
10 Appellants "valid"). Chintalapati determines whether a connection is idle (i.e. valid/usable) by
11 polling the connection issuing an asynchronous (non-blocking) I/O operation. Therefore,
12 Chintalapati clearly discloses determining whether or not a connection is valid (usable) by issuing
13 a non-blocking I/O operation and meets the claim language of "to validate individual ones of said
14 idle connections by issuing a non-blocking input/output operations...". (emphasis added)

15
16 The underlined portion of the above-reproduced paragraph evidences a fundamental flaw in the
17 Examiner's analysis. Specifically, the Examiner is asserting that the "idle" is synonymous with
18 "valid/usable." Such an interpretation is entirely inconsistent with Appellants' specification. As
19 discussed in paragraphs [0004]-[0005] and [0018]-[0019] of Appellants' disclosure, the
20 connection pool is a pool of idle connections. Thus, once the connection is in the pool, the
21 connection is known to be idle.

22

23 *Assuming arguendo* that the Examiner's implied claim construction is proper if the
24 connections are in the pool are idle, then ergo, the connections in the pool are valid/usable.
25 However, based upon Appellants' disclosure, this assumption is not made. Instead, despite the
26 connections being idle, a validation process is still used to determine whether the connections are
27 usable. Thus, based upon Appellants' disclosure and the general assumption that different terms

1 have different meanings,³ Appellants' position is that one having ordinary skill in the art would have
2 recognized a distinction between idle connections and idle connections that have been validated. By
3 failing to recognize this distinction, the Examiner is making assertions about the scope and teaching
4 of the applied prior art that is not justified by the teachings of the applied prior art.

5

6

7 Regarding "Argument (3)," the Examiner responded to Appellants arguments regarding
8 the term "validate" and the Examiner's allegations regarding the teachings of the applied prior art
9 regarding this term. Excluding the Examiner's citation regarding the well-known concept that
10 claims are given their broadest reasonable interpretation consistent with the specification, the
11 Examiner responded as follows on page 14 of the Examiner's Answer:

12 **In reply** to argument (3) the Examiner has taken the term validate to be defined as
13 determining whether a connection is usable, an active connection as one that is not usable, and an
14 idle connection as one that is usable. Batra clearly discloses monitoring connections to determine
15 if they are active or idle (column 11 lines 40-67, column 12 lines 1-16). Therefore, Batra discloses
16 determining whether a connection is usable. Regardless of whether Batra teaches closing
17 connections that have been idle for a predetermined period of time Batra still teaches monitoring
18 connections for activity during that time period and thus teaches the claimed invention. Before the
19 time period elapses Batra clearly discloses determining whether a connection is active.
20

21 The Examiner's error in claim construction has already been discussed above. In particular, the
22 Examiner mistakenly believes that "an idle connection [is] one that is usable." As evident from
23 Appellants' specification, this is a wrong assumption since not all idle connections are not usable.
24 Otherwise, Appellants method/system for validating idle connections would have been redundant
25 since, by (the Examiner's) definition, all idle connections are valid/usable.
26

27

³ Applied Medical Resources Corp. v. United States Surgical Corp., 448 F.3d 1324, 1333 n.3 (Fed. Cir. 2006).

1 Regarding "Argument (4)," the Examiner responded to Appellants arguments regarding
2 the Examiner's obviousness analysis. The Examiner's response to these arguments is found in
3 the first full paragraph on page 16 of the Examiner's Answer in which the Examiner asserted the
4 following:

5 **In reply** to (4) the Examiner is aware that Appellants' reason for issuing asynchronous
6 I/O operations over synchronous I/O operations is for the sake of efficiency. However, because the
7 Examiner used the efficiency of issuing an asynchronous I/O operation over that of a synchronous
8 I/O operation for validating connection as motivation for combining references does not mean that
9 the Examiner's motivation was pulled directly from Appellants' disclosure. It would have been
10 obvious to one of ordinary skill in the art issuing asynchronous I/O operations for polling
11 connections would be more efficient than issuing synchronous I/O operations because they do not
12 block the connection which they are polling in order to determine if it is active or idle. As stated in
13 the definition above, "*the requesting task and the I/O operation maybe running concurrently*"
14 meaning the connection being polled by the asynchronous I/O operation is not blocked by the I/O
15 operation. Which translates to greater efficient because the idle connection is not prevented from
16 being allocated by being polled and could still be used even though it is in the process of being
17 polled.
18

19 The Examiner's arguments appears to rest on the belief that so long as the Examiner can establish
20 a benefit for the particular "missing element," the missing element would have been obvious. As
21 recognized by the Federal Circuit, "virtually all [inventions] are combinations of old elements."⁴
22 Thus, every element of a claimed invention may often be found in the prior art. Moreover,
23 almost all known elements have some type of use/benefit associated with them. As such, merely
24 establishing that a missing element has some benefit is not sufficient to establish obviousness.
25

26 Appellants arguments were directed to the specific "efficiency" arguments previously-
27 presented by the Examiner and allegedly supported by certain cited passages in the applied prior
28 art. These arguments were not addressed by the Examiner. Notwithstanding the Examiner's
29 allegations regarding the benefits of issuing synchronous I/O operations, the Examiner's analysis
30 fails to take into account simple common sense in determining whether or not one having

⁴ In re Rouffet, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998) (quoting Environmental Designs, Ltd. v. Union Oil, 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1993)).

1 ordinary skill in the art would have been realistically impelled to combine the teachings of the
2 applied prior art.

3

4 The Examiner asserts that Batra teaches a connection pool management system for
5 managing a store of a plurality of idle connections (see page 3 of the Examiner's Answer). The
6 Examiner then relies upon Chintalapati to teach polling a connection to determine whether the
7 connection is active or idle. Since the Batra already knows that the connections are idle, one
8 having ordinary skill in the art, while employing common sense, would not look to modify Batra
9 based upon Chintalapati's teachings to determine that the connections is active or idle since Batra
10 already knows that the connection is idle. Since the problem of identifying idle connections has
11 already been solved, one having ordinary skill in the art would not have been realistically
12 impelled to make the Examiner's proposed modification.⁵

13

14 Appellants have already addressed the Examiner's other responses regarding "Argument
15 (4)." However, of particular note is the following assertion found on page 20 of the Examiner's
16 Answer.

17 Furthermore, the fact that both Batra and Chintalapati are shown to operate in the same
18 environment (i.e. both are monitoring connections in a connection pool to determine if they are
19 active or idle) is motivation enough to combine.

20
21 This one argument evidences the Examiner's approach to establishing an obviousness rejection,
22 which is to make conclusory statements having little regard to the facts and the law. As an aside,
23 despite the Examiner's assertion, the teachings of Chintalapati do not make even a single
24 reference to a connection pool.

⁵ See the non-precedential opinion of *Ex parte Rinkevich*, Appeal 2007-1317 ("we conclude that a person of ordinary skill in the art *having common sense* at the time of the invention would not have reasonably looked to Wu to solve a problem already solved by Savill") (emphasis in original).

1

2

3 Regarding "Argument (5)," the Examiner responded to Appellants' arguments as to claim
4 3. Appellants comments regarding the Examiner's failure to establish that using LIFO order for
5 "idle connections" was well-known, and that even if this concept was well-known, the Examiner
6 failed to establish a common sense rationale for modifying the applied prior art. The Examiner
7 responded, in part, as follows on pages 22 and 23 of the Examiner's Answer:

8 In fact Appellants' own specification points to the connection pool using an array/array type data
9 structure configuration to store the idle connections (paragraph [0007], [0018]). As is well known
10 in the art an array is a type of data structure and as such the references relied upon by the
11 Examiner to provide evidence that LIFO ordering is well known in the art directly applies to
12 Appellants' claimed invention. Appellants imply that because Appellants are ordering idle
13 connections that somehow techniques well known in the art do not apply. What an array/data
14 structure contains has no direct bearing on how it is ordered. Whether it be idle connections, a list
15 of names, or any other data. The method of ordering an array (i.e. LIFO) is determined by how the
16 array is to be accessed. (emphasis added).

17
18 There are dozens, if not hundreds of reasons, why certain data is stored and retrieved using
19 LIFO. Similarly, there are dozens, if not hundreds of reasons, why certain data is stored and
20 retrieved using FIFO (first in, first out), which is the exact opposite of LIFO. Moreover, in many
21 instances, data is stored and retrieved in a completely random manner.

22

23 What the Examiner has failed to show is why one having ordinary skill in the art would
24 have been realistically impelled to employ LIFO ordering of idle connections. Not only has the
25 Examiner failed to show a common sense rationale for LIFO ordering of idle connections, the
26 Examiner has failed to establish a common sense rationale for any type of ordering of idle
27 connections.

28

1 In responding to Appellants' lack of an established common sense rationale to make the
2 proposed modification, the Examiner asserted the following:

3 Appellants also allude to a lack of common sense rationale that would have impelled one
4 of ordinary skill in the art to make the proposed modification. Common sense dictates that if one
5 wants the most recent item added to an array the first one that would be retrieved would be that
6 last one that was inserted, which, would naturally lead one to the use of a LIFO ordering. LIFO
7 ordering is a common technique used when working with data structures and therefore would be
8 an obvious choice when that last thing inserted into the array was to be the first thing retrieved.
9 The very name (LIFO) would be enough to cause one of ordinary skill in the art to apply this
10 obvious ordering to an array to ensure the last idle connection in was the first idle connection out.
11 (emphasis added)

12
13 Entirely absent from the Examiner's assumption in the underlined portion of the above-
14 reproduced passage is an explanation as to why "one wants the most recent item added to an
15 array." The Examiner assumes this to be true but fails to explain why this assumption is true
16 with regard to idle connections. On the contrary, as described in paragraph [0018], Appellants
17 have determined that the likelihood of provision a valid connection from the pool of idle
18 connections would be increased by provisioning a connection that was most recently added to the
19 pool (i.e., LIFO). The Examiner has neither provided a comparable rationale or any common
20 sense rationale that would have realistically impelled one having ordinary skill in the art to
21 employ LIFO ordering of idle connections.

22

For the reasons set forth in the Appeal Brief of February 7, 2008, and for those set forth herein, Appellants respectfully solicit the Honorable Board to reverse the Examiner's rejection under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: June 29, 2008

Respectfully submitted,

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